

In re patent application of:
BEADLE ET AL.
Continuation of 09/391,919 filed 09/09/99
Filed: HEREWITH
Serial No. NOT YET ASSIGNED

In the claims:

Please cancel Claims 1-31.

Please add new Claims 32-36.

32. (new) A method of interfacing data with a data memory comprising the steps of:

(a) storing said data in said data memory by:

(a1) writing said data into a storage location of said data memory, and

(a2) writing, into a plurality of respective storage regions of a content-addressable memory, respective address pointer words, each of which includes a respective key field that is used to identify said data, and an address field that identifies the address of said storage location of said data memory;

(b) reading said data from said data memory by:

(b1) coupling a key to key fields of address pointer words stored in storage regions of said content-addressable memory, and accessing said address of said storage location of said data memory from the address field of an address pointer word whose key field contains said key;

(b2) reading said data from said storage location of said data memory in accordance with said address accessed in step (b1); and

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(c) coupling said address accessed in step (b1) to said content-addressable memory, to determine whether said address of said storage location of said data memory is contained in another address pointer word stored in said content-addressable memory.

33. (new) The method according to claim 32, wherein steps (b2) and (c) are conducted during a common memory cycle for said content-addressable memory.

34. (new) The method according to claim 32, wherein step (c) comprises selectively making said storage location of said data memory available for storage of new data, in dependence upon whether or not said address of said storage location of said data memory is contained in another address pointer word stored in said content-addressable memory.

35. (new) The method according to claim 32, wherein step (a) comprises writing, into plural storage regions of said content-addressable memory, a plurality of address pointer words, each of which contains a respectively different key field used to identify said data, and said address of said storage location of said data memory.

36. (new) The method according to claim 32, wherein said content-addressable memory comprises a data bit storage cell

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having a data input through which a data bit is written into said data bit storage cell, a data output through which a data bit is read out of said data bit storage cell, and an address input through which said data bit storage cell is selectively accessed, and a data bit comparator coupled to said data bit storage cell and being configured to determine whether the data bit stored in said data bit storage cell matches a reference data bit during a read cycle for said data bit storage cell.